

IN THE CLAIMS

Please amend the claims as follows:

1. (Currently Amended) A lead assembly comprising:

a lead body extending from a distal end to a proximal end;
a conductor disposed within the lead body;
a piston movably disposed within the lead body;
a fixation helix supported by the piston at a first portion of the fixation helix, the first portion of the fixation helix supported by the piston forming a drive mechanism including one or more helical drive grooves, the helical drive grooves defined in part by an outer surface of the piston and successive turns of the fixation helix; and

a housing portion disposed near the distal end of the lead body, the housing portion including a guide disposed on an inner surface thereof and rideable within the helical drive grooves allowing at least one of advancing or retracting of the fixation helix relative to the lead body.

2. (Original) The lead assembly as recited in claim 1, wherein the first portion of the fixation helix is coupled with the piston.

3. (Currently Amended) The lead assembly as recited in claim 1, wherein the piston has a recess wrapped around, and extending inwardly from, ~~[[an]] the~~ outer surface thereof such that one or more portions of the recess are separated from one another by a non-recessed portion, and at least a portion of the first portion of the fixation helix is disposed within the recess.

4. (Original) The lead assembly as recited in claim 3, wherein the recess has a helical shape.

5. (Original) The lead assembly as recited in claim 3, wherein the recess has a first width and the first width is less than a diameter of the first portion of the fixation helix.

6. (Original) The lead assembly as recited in claim 3, wherein approximately 1/3 to 1/2 of a diameter of the fixation helix is disposed within the recess.

7. (Canceled)

8. (Currently Amended) A lead assembly comprising:

a lead body extending from a distal end to a proximal end;

a housing disposed near the distal end of the lead body, the housing including a guide disposed on an inner surface thereof;

a conductor disposed within the lead body;

a piston movably disposed within the housing; and

a fixation helix coupled with and protruding radially around, the piston along a first longitudinal portion of the fixation helix, the first portion of the fixation helix coupled with the piston forming a drive mechanism that rides along the guide allowing at least one of advancing or retracting of the fixation helix relative to the lead body.

9. (Previously Presented) The lead assembly as recited in claim 8, wherein the guide is a helical guide protruding from the inner surface of the housing.

10. (Previously Presented) The lead assembly as recited in claim 9, wherein the helical guide is a segmented helical guide.

11. (Previously Presented) The lead assembly as recited in claim 8, wherein the fixation helix is coupled with the piston along a recess extending inward from an outer surface of the piston, a first portion of the recess separated from a second portion of the recess by a non-recessed piston portion.

12. (Original) The lead assembly as recited in claim 8, wherein the fixation helix has an inner diameter and the piston has an outer diameter, and the outer diameter is greater than the inner diameter prior to coupling the fixation helix with the piston.

13. (Original) The lead assembly as recited in claim 8, wherein the fixation helix is coupled with the piston along a helical recess within the piston.

14. (Original) The lead assembly as recited in claim 8, wherein the fixation helix is electrically coupled with the conductor.

15. (Currently Amended) A lead assembly comprising:

a conductor;

a piston electrically coupled with the conductor;

an active fixation helix supported by the piston at a first portion of the fixation helix, the first portion of the fixation helix supported by the piston forming a drive mechanism that longitudinally advances and retracts the fixation helix; and

a housing including a guide therein, the guide extending from an inner surface of the housing and adapted to interact directly with the first portion of the fixation helix.

16. (Original) The lead assembly as recited in claim 15, wherein the active fixation helix is electrically coupled with the piston.

17. (Previously Presented) The lead assembly as recited in claim 15, wherein the active fixation helix is recessed within an outer axial surface portion of the piston.

18. (Previously Presented) The lead assembly as recited in claim 15, wherein the active fixation helix is mechanically coupled with the piston via one or more recessed groove portions separated by a non-recessed piston portion.

19. (Currently Amended) A method comprising:

providing a lead assembly including:

a lead body extending from a distal end to a proximal end;

a conductor disposed within the lead body;

a piston movably disposed within the lead body;

a fixation helix supported by, and protruding radially around, the piston at a first portion of the fixation helix, the first portion of the fixation helix forming a drive mechanism;

a housing including a guide extending from an inner surface thereof; rotating the fixation helix; and

longitudinally driving the fixation helix with the drive mechanism, including moving the first portion of the fixation helix directly along the guide.

20. (Previously Presented) The method as recited in claim 19, further comprising recessing at least a part of the first portion of the fixation helix within the piston such that a non-recessed portion of the piston separates successive turns of the fixation helix.

21. (Previously Presented) The method as recited in claim 19, further comprising recessing approximately 1/3 to 1/2 of a diameter of the fixation helix within the piston such that successive turns of the fixation helix are separated by a non-recessed piston portion.

22. (Original) The method as recited in claim 19, further comprising recessing at least a part of the first portion of the fixation helix within a helical groove of the piston.

23. (Original) The method as recited in claim 19, further comprising coupling the first portion of the fixation helix with the piston.

24. (Previously Presented) The lead assembly as recited in claim 1, wherein the housing portion comprises a molded component.

25. (Previously Presented) The lead assembly as recited in claim 8, further comprising a stop adapted to prevent over extension of the fixation helix from the lead body, the stop protruding around a portion of the piston.

26. (Previously Presented) The lead assembly as recited in claim 15, further comprising a fluoromarker coupled with a portion of the housing.